UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/272,807	03/19/1999	AVNER BEN-DOR	003829.P002	6116

7590 12/04/2002

BLAKELY SOKOLOFF
TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD 7TH FLOOR
LOS ANGELES, CA 90025

EXAMINER
TRAN, MAIKHANH

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/272,807	BEN-DOR ET AL.	
	Examiner	Art Unit	
	MAIKHANH T. TRAN	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-10,12-18,23-27,29-32,34-36 and 38-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-10,12-18,23-27,29-32,34-36 and 38-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicants' Amendment filed on 9/20/02 has been fully considered and made of record. Based on this Amendment, claims 2, 3, 6 and 12-18 have been amended; claims 11 and 19-21 have been canceled. Claims 2-10, 12-18, 23-27, 29-32, 34-36, 38-55 are now pending. In view of the following new ground of rejection, this office action is NOT made final.

Allowable Subject Matter

2. The indicated allowability of claims 23-27, 29-32, 34-36, 38-39, 49-55 and 2, 14, 40, 46 is withdrawn in view of the newly discovered reference(s) to Lo et al. (U.S. 6,324,178 B1). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-10, 12-18, 23-27, 29-32, 34-36, 38-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo et al. (U.S. 6,324,178 B1).

- As to claims 2, 12, 30, 23 and 31, Lo et al., in figures 2A, 2B, 3A and the description associated with the figures, disclose a system and a method of controlling devices across a network, the system comprising:

* a network (IP Ethernet network **250**) having a host (230-236) coupled thereto, the host executing software to generate packets for communication on the network;

* a bus (IEEE1394 bus **240**) with a bus device (210-218) coupled thereto, wherein the bus device generates bus device packets for transport to the host and sends the bus device packets on the bus, the interface encapsulating the bus device packets into a network packet and forwards the network packet to the host; and the bus device generates isochronous data and the network operates asynchronously, such that isochronous data is transported over an asynchronous network;

* an interface (220) coupling the network to the bus, the interface and the host coordinating to tunnel bus events over the network between the host and the bus device by encapsulating bus events into packets associated with network protocols, transferring the encapsulated bus events over the network, subsequently decapsulating the bus events to recreate the bus events and forwarding the bus device packet to the bus device (see figs 3A-3B).

Lo et al. do not clearly suggest that the host (230-236) runs an application that generates packets for the bus device and relies on an operating system that includes a driver for the bus device that issues the bus device packets and redirects the bus

device packets to a network stack that encapsulates the bus device packets to create a network packet and sends the network packet to a remote bus device via the interface (as recited in claims 2 and 30) and that the host (230-236) executes a network driver that decapsulates the network packet, identifies bus device packets therein and redirects the bus device packets to a bus device driver running thereon (as recited in claims 12 and 31).

It is a common practice in Ethernet networks or computer networks to generate and encapsulate communication data packet prior to sending the communication data packet over a network between two different communication domains and to decapsulate the encapsulated data packet to recreate the communication data packet, identify the communication data packet (i.e., the destination address of the packet) and redirect the communication data to an associated driver, the redirector and the driver provide the facilities necessary for a client computer utilizing the Windows NT brand operating system to gain access via the network communications link to files, named pipes, printers, etc. associated with the compatible network server.

In order to clarify the teaching in Lo et al., it would have been obvious to ones skilled in the art at the time the invention was made to apply a software/application in the host (230-236) in Lo et al. to generate packets for the bus device and encapsulates the bus device packets to create a network packet for sending to the bus device over the network (250) and to execute a network driver that decapsulates the network packet, identifies bus device packets therein and redirects the bus device packets to a bus device driver running thereon.

- As to claims 3-5, in Lo et al., the interface (220) generates network packets that encapsulate the bus events in a network protocol portion wherein the network protocol portion comprises an IP portion (see col. 8, lines 32-43) and a header (**330**) for information to recreate bus events (see col. 6, lines 25-40).

- As to claim 6, the claimed limitation (i.e., each tunneled request includes a tunneling header and a tunneling data portion, wherein the tunneling data portion is specific to each tunneling packet type and tunneling transaction type, and the tunneling header is common among tunneling packet types) is standard in the art.

- As to claim 7, although Lo et al do not clearly suggest that the tunneling header includes a field which specifies the type of packet as one of a group of control packet, an information packet, or an ownership packet, the claimed limitation is standard in the art especially for buses systems that support isochronous data transmission such as IEEE 1394 or USB.

- As to claim 8, in Lo et al., the tunneled packet comprises an IEEE 1394 packet.

- As to claim 9, the tunneled packet in Lo et al. could be any type of packet (including USB packet) and not limited to IEEE 1394 packet (see col. 6, lines 5-8), therefore the teaching in Lo et al. encompasses the claimed limitation.

- As to claim 10, it is well known in the art that when tunneling applied for different communications networks, it is a need to identify packet type (data or control information) and transaction type (protocol network) in the tunneling header for disassembly and reassembly purposes. Therefore it would have been obvious to one skilled in the art to apply that method in Lo et al to enhance Lo et al.' teaching.

- As to claim 13, it is inherent that the interface in Lo et al. comprises a remote peripheral server (see col. 4, lines 55-57).

- As to claim 14, in Lo et al., the network is an IP Ethernet network.

- As to claims 15-18, in Lo et al., the bus (240) could be any type of bus (see col. 6, lines 5-8), therefore it could be serial bus (as recited in claim 15), parallel bus (as recited in claim 16), IEEE-1394 bus standard (as recited in claim 17) or UBS bus (as recited in claim 18).

- As to claims 24-27 and 29, these claims are rejected with the same reasons as set forth in claims 3, 5-7 and 10.

- As to claims 32 and 49-52, these claims are rejected with the same reasons as set forth in claims 13, 2, 4-5 and 10.

- As to claims 40-48, these claims are rejected with the same reasons as set forth in claims 2-6, 13-14 and 8-9.

- As to claims 38 and 34-36, these claims are rejected with the same reasons as set forth in claims 9, 2-3 and 7.

- As to claims 39 and 53-55, these claims are rejected with the same reasons as set forth in claims 12, 9, 2-3 and 7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAIKHANH T. TRAN whose telephone number is 703-308-7911. The examiner can normally be reached on MON-FRI 8:30AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SEEMA RAO can be reached on 703-308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Maikhanh Tran

DANG TON
PRIMARY EXAMINER

November 29, 2002